

Stationary Source Subcommittee
Fixed and Portable Diesel-Fueled Engine
Draft Data Templates

(March 17, 1999)

Particulate emissions from diesel-fueled engines have been identified as a Toxic Air Contaminant by the California Air Resources Board (ARB). The ARB recently established a series of working groups to help identify the need for and appropriate degree of control of particulate emissions from diesel-fueled engines. One of these working groups, the Stationary Source Subcommittee, is charged with investigating particulate emissions from fixed and portable diesel-fueled engines not otherwise considered a mobile source.

Working with the Stationary Source Subcommittee, the ARB must: 1) identify the categories of fixed and portable diesel-fueled engines; 2) estimate the number of sources within each category; 3) evaluate the risks from the sources in each category; and 4) determine the reduction in risk associated with implementing various control measures. Section 39665 of the California Health and Safety Code requires the ARB to base its analysis on reasonably available data.

The ARB believes that the tasks listed above can be completed with existing information resources, including the emission inventory. However, we would like to supplement this data with specific information on the emission and operational characteristics of stationary and portable diesel-fueled engines used in California. To this end, we have prepared two preliminary lists of supplemental information. The first list identifies the data elements that we believe can best be provided by operators of diesel-fueled engines. The second list identifies the data elements that we believe can best be provided by manufacturer's and suppliers of diesel-fueled engines.

Please take an opportunity to review the following two lists. If you have questions or comments, please contact Robert Hughes at (916) 327-5608 or via email at rhughes@arb.ca.gov. Comments received before March 24, 1999 will be used to prepare final templates which will be posted on the Stationary Source Subcommittee web site (<http://www.arb.ca.gov/toxics/diesel/ssd.htm>) for use by Subcommittee members and interested members of the public.

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Data Template for Operators of Fixed and Portable Diesel-Fueled Engines

(March 17, 1999)

The following is a preliminary list of information that would be requested from operators of fixed and portable diesel-fueled engines. This information may be used to refine the list of diesel-fueled engine categories and to evaluate the risks associated with the operation of diesel-fueled engines within these categories. This information may also be used to evaluate the reduction in risk associated with various control measures, and/or to establish an emission database for use by local air pollution control districts in the evaluation of the risks associated with the installation of new diesel-fueled engines.

Facility Information - *The data elements listed below may be used to refine the categories of diesel-fueled engines and to estimate the number of diesel-fueled engines within each category.*

- Facility name
- ARB Facility ID, if known
- Street Address
- City, County, State and Zip Code
- Nature of Business
- Standard Industrial Classification Code

Engine Information - *The following data elements may be used in conjunction with the operational and emission information to evaluate the risks from diesel-fueled engines within specific source categories. This information may also be used to refine the categories of diesel-fueled engines and to establish an emission database for use by local air pollution control districts in the evaluation of the risks associated with the installation of new diesel-fueled engines.*

- Make, Model and Series
- Year of Manufacture
- Engine Type (i.e. 2-stroke, 4-stroke)
- Aspiration (i.e. natural, turbocharger, turbocharger w/ aftercooler, etc...)
- Maximum Rated Brake Horsepower (for generators: bhp @ 1800 rpm)
- Emission Controls (i.e. injection timing retard, catalyst, particulate traps, etc...)
- Fuel Consumption Rate at rated brake horsepower
- ARB/EPA Engine Family Name (if applicable)

Operational Information for Fixed Equipment - *This information may be used in conjunction with the engine and emission information to evaluate the risks from diesel-fueled engines within specific source categories. In addition, this information may be used to help refine the categories of diesel-fueled engines.*

- Description of Engine Use (i.e. generator, pump, etc...)
- Frequency of Use (i.e. prime, standby)
- Hours of Engine Operation (max and typical: hrs/day, hrs/year)

Typical Timing of Engine Operation (day, night, both)
Quantity of Fuel Consumed (max gal/day, max gal/year, typical gal/year)
Fuel Type (diesel #1, diesel #2, low-sulfur diesel #2, etc...)
Permit-Established Operating Limits (max allowable: hrs/day, hrs/yr, gal/day, gal/yr, etc...)
Approximate Fuel Cost (price/gal)
Distance to Nearest Receptor
Proximity and Size of Large Nearby Buildings
Urban or Rural Setting
Census Tract, if known
For Portable Engines
- Duration at Each Site (max and typical number of days/year)
- Hours of Operation at Each Site (max and typical hrs/day, hrs/year)
- Designated Rental Equipment? (Y/N)

Emission Information - *This information may be used in conjunction with the engine and operational information to evaluate the risks from diesel-fueled engines within specific source categories. This information may also be used to establish an emission database for use by local air pollution control districts in the evaluation of the risks associated with the installation of new diesel-fueled engines.*

Exhaust Flow Rate or Exhaust Gas Velocity (at rated load)
Exhaust Gas Temperature (at rated load)
Stack Configuration
- Exhaust Stack Direction (horizontal, vertical or angled)
- Stack Height
- Stack Diameter
- Type of Rain Cap, if any
Mean Ambient Temperature, if known
NO_x Emission Rate (at rated load)
VOC Emission Rate (at rated load)
CO Emission Rate (at rated load)
SO_x Emission Rate (at rated load)
PM₁₀ Emission Rate (at rated load)
Source of Emission Rate Data (i.e. test on specific engine, test on similar engine, manufacturer estimate, AP-42, other)
Emission Test Method (if applicable)

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Data Template for Manufacturer/Suppliers of Fixed and Portable Diesel-Fueled Engines

(March 17, 1999)

The following is a preliminary list of information that would be requested from manufacturers and suppliers of fixed and portable diesel-fueled engines. This information may be used to refine the list of diesel-fueled engine categories and to evaluate the risks associated with the operation of diesel-fueled engines within these categories. This information may also be used to evaluate the reduction in risk associated with various control measures, or to establish an emission database for use by local air pollution control districts in the evaluation of the risks associated with the installation of new diesel-fueled engines.

Engine Information

Make, Model and Series

Year of Manufacture

Engine Type (i.e. 2-stroke, 4-stroke)

Aspiration (i.e. natural, turbocharger, turbocharger w/ aftercooler, etc...)

Maximum Rated Brake Horsepower (for generators: bhp @ 1800 rpm)

Emission Controls (i.e. injection timing retard, catalyst, particulate traps, etc...)

Fuel Consumption Rate at rated brake horsepower

ARB/EPA Engine Family Name (if applicable)

Emission Information

Exhaust Flow Rate or Exhaust Gas Velocity (at rated load)

Exhaust Gas Temperature (at rated load)

Stack Configuration

- Exhaust Stack Direction (horizontal, vertical or angled)
- Stack Height
- Stack Diameter
- Type of Rain Cap, if any

NOx Emission Rate (at rated load)

VOC Emission Rate (at rated load)

CO Emission Rate (at rated load)

SOx Emission Rate (at rated load)

PM10 Emission Rate (at rated load)

Source of Emission Rate Data (i.e. test on specific engine, test on similar engine, manufacturer estimate, AP-42, other)

Emission Test Method (if applicable)